



## **Antibacterial Action**

### *Hands-On Activity*

#### **Background Information**

In recent years, a number of antibacterial soaps and detergents have been introduced. How effective are they at killing germs? Do all of them work the same, or does their effectiveness differ among brands? In this activity, you'll test different antibacterial soaps.

#### **What You Need**

- ◆ four petri dishes with sterile nutrient agar
- ◆ three different antibacterial soaps (hand soaps, dish soaps, or a combination)
- ◆ three medicine droppers
- ◆ wax pencil
- ◆ adhesive tape

#### **What to Do**

1. Wash your hands with regular soap. Then run your fingers across your desk or another surface.
2. In each of the four petri dishes, wipe your finger through the sterile agar in a zigzag motion.
3. Use the adhesive tape to seal one petri dish. Mark this "control dish A" with the wax pencil.
4. Use a medicine dropper to transfer a drop of the first soap to another petri dish. Write the type of soap in this dish on the worksheet. Seal the petri dish with tape, and label it "B".
5. Repeat step 4 for the second and third soaps, using a different medicine dropper and petri dish each time. (Label these petri dishes "C" and "D.")
6. Place all four petri dishes in warm environment. For the next three days, check the dishes, and write your observations in the worksheet chart. At the end of the experiment, answer the worksheet questions.

# Worksheet Antibacterial Action

Name \_\_\_\_\_

1. What difference, if any, do you see between four petri dishes?

Dish	Soap	Comparisons and Other Observations		
		Day 1	Day 2	Day 3
A (control)				
B				
C				
D				

2. How effective were the antibacterial soaps at killing bacteria? Which one was the best? Which one was the worst?

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3. Using what you know about the differences between good and bad bacteria, which type of bacteria do you think the most effectively kill? Why?

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